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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/990,468

11/21/2001

Qi Bi

Bi 23-41-30-3-39

3187

30594

7590

11/02/2004

HARNESS, DICKEY & PIERCE, P.L.C.

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RESTON, VA 20195

EXAMINER

PHUNKULH, BOB A

ART UNIT

PAPER NUMBER

2661

DATE MAILED: 11/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/990,468

**Applicant(s)**

BI ET AL.

**Examiner**

Bob A. Phunkulh

**Art Unit**

2661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 November 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

***Claim Objections***

Claim 1 is objected to because of the following informalities: please correct the subject matter in line 6 from "and," to --and--. Appropriate correction is required.

5           Claim 3 is objected to because of the following informalities: the claimed subject matters are already included in claim 1. Appropriate correction is required.

          Claims 11, 15, 25 are objected to because of the following informalities: the examiner believes the applicant intends to claim the transceiver as "repeater" not as  
10 "base station" if that is true, correct the subject matter accordingly. Appropriate correction is required.

***Drawings***

          The drawings are objected to because labels in figures 2-4 are not clearly visible  
15 i.e. BS 14 (figures 2 and 4); and 60, 30, 180, 300 (figure 3). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing  
20 should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief

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description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

10 The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 28-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 28, it is not clear what it meant by "so that the dominant pilot" as cited in lines 7.

20 ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

25 (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5            Claims 1, 3-5, 8-12, 14-15, 17-18, 21-25, 28-32, 34-35 are rejected under 35

U.S.C. 103(a) as being unpatentable over Weaver, Jr. et al. (US 6,108,364), hereinafter Weaver.

Regarding claims 1, 3, 8-9,12, 21-24, 28-29, 31, Weaver discloses a method for reducing the effect of multiple dominant pilots in a CDMA communication system

10        comprising the steps of:

linking a transceiver element with a nearby base station for transporting and amplifying signals between said transceiver element and said nearby base station (the repeater is link to a base station 115 and operable for transporting and amplifying signals between the repeater and the base station see col. 9 lines 16-31); and

15        transmitting from said transceiver element forward link signals of a nearby sector associated with said nearby base station (see col. 9 lines 16-31).

Weaver fails to explicitly disclose locating a fixed transceiver element in a high density area of multiple dominant pilots.

20        However, it would have been obvious to one having ordinary skill in the art at the time of invention was made to place the repeater of Weaver in high density of area of multiple dominant of pilots or at the area in which increased coverage is desired (see col. 9 lines 16-31). This claimed subject matter is an intended use. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed  
25        invention from the prior art. If the prior art structure is capable of performing the

intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

5

Regarding claims 4-5, 17-18, 34-35, Weaver is silent on linking the repeater and the base station by a wired connection or a wireless connection.

However, it would have been obvious to one having ordinary skill in the art at the time of invention was made to implement the linking between the repeater and base station of Weaver by wired connection or wireless connection for design choice –where wireless connection provides the flexibility of moving the repeater as desired and wired line connection provides the flexibility of increasing coverage where the wireless connection can not reach i.e. the shadow of a large building or in a free way tunnel.

15 Regarding claims 10, 14, Weaver discloses the transceiver element is a simulcasting element (see col. 6 lines 1-10).

Regarding claims 11, 15, 25, 32, Weaver discloses the transceiver element is an omni-directional base station (see col. 6 lines 1-10).

20

Regarding claim 30, Weaver discloses the predetermined dB threshold level is within a range of 3 to 6dB of the local signal strength (see col. 5 lines 5-8).

Claims 2, 13, 16, 27, 33, are rejected under 35 U.S.C. 103(a) as being  
5 unpatentable over Weaver in view of Schroderus (US 5,983,072).

Regarding claims 2, 13, 16, 27, 33, Weaver fails to explicitly disclose receiving reverse link signals (mobile to base station or reverse link) at said transceiver element for said nearby sector associated with said nearby base station.

Schroderus, on the other hand, disclose receiving reverse link signals (mobile to  
10 base station or reverse link) at said transceiver element for said nearby sector associated with said nearby base station (see col. 2 lines 29-37 and figure 1).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to includes the teaching of Schroderus especially the repeater with ability to receives reverse link signals at the repeater and forwarding the  
15 received signals to the base station for providing the repeater with operable both forwarding/relaying traffic between the mobile stations and the base station.

Claims 6-7, 19-20, 26 are rejected under 35 U.S.C. 103(a) as being  
unpatentable over Weaver in view of Kinnunen et al. ( US 6,052,557), hereinafter  
20 Kinnunen.

Regarding claims 6-7, 19-20, 26, Weaver fails to disclosed that transmitting from the transceiver element with less power than transmitting from the nearby base station.

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Kinnunen, on the other hand, teach that by relaying signals using a repeater in cellular communication system transmission power can be saved (**see col. 5 lines 24-40**).

Therefore, it would have been obvious to one having ordinary skilled in the art at the time of invention was made to transmit signals with less power from the repeater to its destinations than transmitting from the base station to the repeater for saving power and avoid interference potential among signals.

***Conclusion***

**Any response to this action should be mailed to:**

The following address mail to be delivered by the United States Postal Service (USPS) only:

Mail Stop \_\_\_\_\_  
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P. O. Box 1450  
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**or faxed to:**

(703) 872-9306, (for formal communications intended for entry)

**Or:**

The following address mail to be delivered by other delivery services (Federal Express (Fed Ex), UPS, DHL, Laser, Action, Purolater, Hand Delivery, etc.) as follow:

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220 20<sup>th</sup> Street South  
Customer Window, Mail Stop \_\_\_\_\_  
Crystal Plaza Two, Lobby, Room 1B03  
Arlington, VA 22202.



Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Bob A. Phunkulh** whose telephone number is **(571) 272-3083**. The examiner can normally be reached on Monday-Tuesday from 8:00 A.M. to 5:00 P.M. (first week of the bi-week) and Monday-Friday (for second week of the bi-week).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's acting supervisor **Kenneth Vanderpuye**, can be reach on **(571) 272-3078**. The fax phone number for this group is **(703) 872-9306**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**Bob A. Phunkulh**



**BOB PHUNKULH  
PRIMARY EXAMINER**

TC 2600  
Art Unit 2661  
October 29, 2004